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10/022,430

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Xiaoyun Hu

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09/29/2005

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CANADA

EXAMINER

LIU, SHUWANG

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/022,430

Applicant(s)

HU ET AL.

Examiner

Shuwang Liu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18, 20-33 and 35-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4-8, 21-30 and 36-38 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 9-18, 20, 22, 31-33 and 35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/12/03.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawing is objected to because there are no labels for blocks 406, 408 and 218 in figure 4. These blocks need to have descriptive labels under 37 CFR 1.84(n) and 1.84(o).

### ***Claim Objections***

2. Claim 36 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.
3. Claims 1-38 are objected to because of the following informalities: insert - -and- - before last limitation, for example, insert- -and- - in line 6 of claim 1 after "bearing signal;" or before "(c)".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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5. Claims 29 and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The limitation of AD converter is not described in the specification or drawings.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 4-8, 21, 23-28, and 36-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Latt (US 5,987,304).

As shown in figure 2, Latt discloses a variable bandwidth transmission/receive device, comprising:

(1) regarding claims 1, 21, 23 and 36:

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a) a first input (RF in) for receiving a message bearing signal characterized by a bandwidth that is variable (see title;

b) a second input (output from 28) for receiving a bandwidth control signal characterized by a frequency, the frequency being variable as a function of the bandwidth of the message bearing signal (it is inherent that in case of bandwidth on demand applications (see lines 53-58), if the bandwidth of the signal at the input changes, the frequency of the bandwidth control signal at the output of 28 should be adjusted); and

c) a filtering stage ( 10, 11 et al.) for processing the message bearing signal and the bandwidth control signal to generate an output signal characterized by a bandwidth, said filtering stage being responsive to a change of frequency of the bandwidth control signal to alter the bandwidth of the output signal (column 2, lines 50-column 3, lines 10).

(2) regarding claims 4 and 24:

wherein filtering stage includes a first spectral shaping filter ( 24a) and a second spectral shaping filter (25).

(3) regarding claims 5 and 25:

wherein said filtering stage includes band pass filters (24a, 25, 24b, 26, 24c and 27)..

(4) regarding claims 6 and 26:

wherein said filtering stage includes a first mixer ( 20) having two inputs (an out of A1 and an output of 23) and an output (an input of 20), the output of said first mixer

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being coupled to an input of a first band pass filter (24a), one input of said first mixer being coupled to said first input for receiving the message bearing signal, the other input of said first mixer receiving a signal at a first frequency ( $f_1$ ).

(5) regarding claims 7 and 27:

wherein said filtering stage includes a second mixer (20a) having two inputs (see figure 2) and an output (an input of 25), one input of said second mixer being coupled to an output of said first band pass filter, the other input of said second mixer receiving a signal at a second frequency ( $f_2$ ), the output of said second mixer being coupled to an input of a second band pass filter (25).

(6) regarding claims 8 and 28:

wherein said filtering stage includes a third mixer (21) having two inputs and an output ( see figure 2), one input of said third mixer being coupled to an output of said second band pass filter (25), the other input of said mixer receiving the signal at the first frequency ( $f_1$ ), the output of said second mixer generating the output signal characterized by a bandwidth.

(7) regarding claim 37:

further comprising a bandwidth control signal source (28 and 23) connected to said second input for supplying the bandwidth control signal (output of 23), said bandwidth control signal source being adapted to detect a change in the bandwidth of the message bearing signal and to change the frequency of the bandwidth control signal on the basis of the detected change (it is inherent that in case of bandwidth on demand

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applications (see lines 53-58), if the bandwidth of the signal at the input changes, the frequency of the bandwidth control signal at the output of 28 should be adjusted).

(8) regarding claim 38:

further comprising a bandwidth control signal source connected (28 and 23) to said second input for supplying the bandwidth control signal (output of 23), said bandwidth control signal source being adapted to receive an indication of a change in the bandwidth of the message bearing signal and to change the frequency of the bandwidth control signal on the basis of the received indication (it is inherent that in case of bandwidth on demand applications (see lines 53-58), if the bandwidth of the signal at the input changes, the frequency of the bandwidth control signal at the output of 28 should be adjusted).

8. Claim 22 is rejected under 35 U.S.C. 102(e) as being anticipated by Miyashita (US 6,240,122, see IDS).

As shown in figure 1, Miyashita discloses a local oscillator manager, comprising:

a) a first input (19) for receiving a bandwidth control signal (17) characterized by a frequency that is variable;

b) a local oscillator (36) generating a local oscillator signal characterized by a frequency;

c) a first single side band up converter (34) for receiving the bandwidth control signal and the local oscillator signal and for releasing a signal that is the sum of the

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frequency of the local oscillator signal and the frequency of the bandwidth control signal;  
and

d) a second single side band up converter (32) for receiving the bandwidth control signal and the local oscillator signal and for releasing a signal that is the difference of the frequency of the local oscillator signal and the frequency of the bandwidth control signal (column 5, lines 45-column 6, line 6).

***Allowable Subject Matter***

9. Claims 2, 3, 9-18, 20, 31-33 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shuwang Liu whose telephone number is 571 272-3036. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shuwang Liu  
Primary Examiner  
Art Unit 2634

September 28, 2005